Amendments To Claims

1. (Currently Amended) A distributed system, comprising:

a set of nodes that communicate via a set of sub-nets of the distributed system, the nodes each having a local clock, the nodes maintaining time synchronization among the local clocks by transferring a set of timing data packets via the sub-nets;

time synchronization bridge that coordinates time synchronization among the sub-nets in response to the timing data packets by determining a highest quality clock among the local clocks and transferring an additional set of timing data packets via the sub-nets in response to the highest quality clock.

2. (Original) The distributed system of claim 1, wherein the time synchronization bridge maintains an internal time and synchronizes the internal time to a local clock on a selected one of the sub-nets.

3. (Original) The distributed system of claim 2, wherein the time synchronization bridge uses the internal time to synchronize the local clocks on the remaining ones of the sub-nets.

4. (Original) The distributed system of claim 1, wherein the time synchronization bridge maintains an internal time and synchronizes the local clocks to the internal time.

5. (Currently Amended) The distributed system of claim 1, wherein the time synchronization bridge determines ~~a master~~ the highest quality clock ~~in the distributes~~

~~system~~ in response to a first set of clock meta-data in the timing data packets and a second set of clock meta-data associated with an internal time maintained by the time synchronization bridge.

6. (Currently Amended) The distributed system of claim 5, wherein the second set of clock meta-data ~~associated with the internal time of the time synchronization bridge~~ indicates a GPS time source.

7. (Currently Amended) The distributed system of claim 5, wherein the second set of clock meta-data ~~associated with the internal time of the time synchronization bridge~~ indicates an atomic clock time source.

8. (Currently Amended) The distributed system of claim 5, wherein the first set of clock meta-data includes an indication of quality of the corresponding local clock.

9. (Currently Amended) The distributed system of claim 5, wherein the first set of clock meta-data includes an indication a number of other time synchronization bridges traversed by the corresponding timing data packet.

10. (Currently Amended) The distributed system of claim 5, wherein the first set of clock meta-data includes an indication that the corresponding local clock is preferred as the ~~master~~ highest quality clock.

11. (Currently Amended) A time synchronization bridge, comprising:

means for maintaining an internal time in the time synchronization bridge;

a set of synchronization modules corresponding to a set of sub-nets, each synchronization module having means for adjusting the internal time in response to a set of timing data packets received via the corresponding sub-net and means for distributing the internal time via the corresponding sub-net; ~~sub-net.~~

means for determining a highest quality clock for the sub-nets in response to the timing data packets and means for transferring an additional set of timing data packets via the sub-nets in response to the highest quality clock.

12. (Original) The time synchronization bridge of claim 11, wherein each synchronization module includes a clock and means for synchronizing the clock in response to the timing data packets received via the corresponding sub-net.

13. (Original) The time synchronization bridge of claim 12, wherein the means for maintaining an internal time includes means for selecting one of the clocks as a primary clock in the time synchronization bridge such that the clocks synchronize to the primary clock.

14. (Original) The time synchronization bridge of claim 13, wherein the means for selecting includes means for selecting the primary clock in response to a set of clock meta-data contained in the timing data packets.

15. (Original) The time synchronization bridge of claim 11, wherein the means for maintaining an internal time comprises a central clock.

16. (Currently Amended) A time synchronization bridge, comprising:

means for maintaining an internal time in the time synchronization bridge;

a set of synchronization modules corresponding to a set of sub-nets, each synchronization module having means for adjusting the internal time in response to a set of timing data packets received via the corresponding sub-net and means for distributing the internal time via the corresponding sub-net wherein the means for maintaining an internal time comprises a central clock and ~~The time synchronization bridge of claim 15,~~ wherein each synchronization module includes means for adjusting the central clock in response to the timing data packets received via the corresponding sub-net and means for selecting one of the synchronization modules to adjust the clock.

17. (Original) The time synchronization bridge of claim 16, wherein the means for selecting includes means for selecting one of the synchronization modules in response to a set of clock meta-data contained in the timing data packets.

18. (Currently Amended) The time synchronization bridge of claim 16 ~~11~~, further comprising a GPS time source.

19. (Currently Amended) The time synchronization bridge of claim 16 ~~11~~, further comprising an atomic clock time source.